

REMARKS

The Office Action mailed June 5, 2007 rejected all pending claims in the present application. Applicants respectfully respond to the Office Action.

I. Rejection of Claims 1-2, 10-14, 21, 26-31, 38, 43-44, 48-49, and 55-56 Under 35 U.S.C. § 102

The Office Action rejected claims 1-2, 10-14, 21, 26-31, 38, 43-44, 48-49, and 55-56 under 35 U.S.C. § 102(e) as being anticipated by U.S. Publication No. 2003/0050008 to Patterson et al. (hereinafter, "Patterson"). This rejection is respectfully traversed.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP § 2131 (citing Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). "The identical invention must be shown in as complete detail as is contained in the ... claim." Id. (citing Richardson v. Suzuki Motor Co., 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)). In addition, "the reference must be enabling and describe the applicant's claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention." In re Paulsen, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994).

Applicants respectfully submit that the claims at issue are patentably distinct from Patterson. Patterson does not disclose all of the limitations in these claims.

Claim 1 recites "identifying a change in a return link signal quality at a gateway for a return link from a terminal communicatively coupled to the gateway through a satellite." Claim 1 also recites "adjusting a data rate for a message sent from the terminal through the return link based on the change in the return link signal quality." Claim 1 has been amended to recite that "identifying the change and adjusting the data rate are performed by at least one of a transmitter of the message and a receiver of the message." This amendment is supported by at least paragraph [0052] of Applicants' specification and original claim 2.

Patterson relates to "data communication systems and methods using satellites." Patterson, par. [0002]. Figures 9 and 10 of Patterson "illustrate an uplink and downlink frequency and channelization plan." Patterson, par. [0095]. In the discussion of Figures 9-10,

Patterson states that “[i]t may ... be important for certain applications to maintain link availability as high as possible. This can be accomplished by changing to more robust waveforms at low bit rates when link conditions degrade.” Patterson, par. [0101]. Patterson also states that “in clear sky conditions, the system may operate at its maximum rated bandwidth and data rates. In heavy rain, the system may reduce data rates to match the current conditions.” Patterson, par. [0103].

The Office Action asserts that Patterson discloses “identifying a change in a return link signal quality at a gateway for a return link from a terminal communicatively coupled to the gateway through a satellite” and “adjusting a data rate for a message sent from the terminal through the return link based on the change in the return link signal quality,” as recited in claim 1. Office Action, page 4. However, Applicants respectfully submit that Patterson does not disclose that “identifying the change and adjusting the data rate are performed by at least one of a transmitter of the message and a receiver of the message,” as recited in amended claim 1. Patterson merely states that “the system may reduce data rates.” Patterson, par. [0103] (emphasis added). It is unclear what is meant by Patterson’s ambiguous reference to “the system.” Such a vague and general statement certainly does not disclose that “identifying the change and adjusting the data rate are performed by at least one of a transmitter of the message and a receiver of the message,” as recited in amended claim 1.

The Office Action cites U.S. Patent No. 6,925,113 to Kim et al. (hereinafter, “Kim”) in support of claim rejections under 35 U.S.C. § 103(a). Kim describes “a rain attenuation compensation method using an adaptive transmission technique and a system using the same.” Kim, col. 1, lines 59-61. Figure 3 of Kim shows a satellite communication system that includes a transmission part 310, a receiving part 320, and a controller 330. Kim further states that “[t]he rain attenuation compensation method using an adaptive transmission technique according to the present invention is made in the controller 330.” Kim, col. 4, line 67 – col. 5, line 3 (emphasis added).

However, Kim does not teach or suggest that “identifying the change and adjusting the data rate are performed by at least one of a transmitter of the message and a receiver of the message,” as recited in amended claim 1. As mentioned above, Kim indicates that the controller 330 implements the rain attenuation compensation method that is described in Kim. However,

Figure 3 of Kim shows the controller 330 as being separate from the transmission part 310 and the receiving part 320. This indicates that the controller 330 is not part of the transmission part 310 or the receiving part 320. The specification of Kim is consistent with this interpretation. For example, Kim states that the controller 330 is used “for controlling the transmission method and transmission power of the transmission part 310 and the receiving method of the receiving part 320....” Kim, col. 4, lines 63-65. Moreover, Applicants cannot find anything in Kim which suggests that the controller 330 could be implemented as part of either the transmission part 310 or the receiving part 320. Accordingly, Kim does not teach or suggest that “identifying the change and adjusting the data rate are performed by at least one of a transmitter of the message and a receiver of the message,” as recited in amended claim 1.

In view of the foregoing, Applicants respectfully submit that claim 1 is allowable. Accordingly, Applicants respectfully request that the rejection of claim 1 and its dependent claims be withdrawn.

Claims 21, 38, and 49 include limitations similar to those in claim 1 that were discussed above. Accordingly, Applicants respectfully request that the rejection of claims 21, 38, 49, and their dependent claims be withdrawn for at least the same reasons as those presented above in connection with claim 1.

II. Rejection of Claims 3-9, 22-25, 39-42, and 50-54 Under 35 U.S.C. § 103(a)

The Office Action rejected claims 3-9, 22-25, 39-42, and 50-54 under 35 U.S.C. § 103(a) as being unpatentable over Patterson in view of U.S. Patent No. 6,925,113 to Kim et al. (hereinafter, “Kim”). This rejection is respectfully traversed.

The factual inquiries that are relevant in the determination of obviousness are determining the scope and contents of the prior art, ascertaining the differences between the prior art and the claims in issue, resolving the level of ordinary skill in the art, and evaluating evidence of secondary consideration. KSR Int’l Co. v. Teleflex Inc., 550 U.S. ___, 2007 U.S. LEXIS 4745, at **4-5 (2007) (citing Graham v. John Deere Co. of Kansas City, 383 U.S. 1, 17-18 (1966)). To establish a *prima facie* case of obviousness, the prior art references “must teach or suggest all the claim limitations.” M.P.E.P. § 2142. Moreover, the analysis in support of an obviousness rejection “should be made explicit.” KSR, 2007 U.S. LEXIS 4745, at **37.

“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Id.* (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Claim 3 has been amended so that it now recites that “identifying the change in signal quality comprises identifying a change that has occurred in a signal-to-noise ratio for the return link from the terminal, and interpreting the change in the signal-to-noise ratio as indicating the change in the return link signal quality.” This amendment is supported by at least paragraphs [0065]-[0066] of Applicants’ specification.

The Office Action correctly acknowledges that Patterson does not teach or suggest “identifying a change that has occurred in a signal-to-noise ratio for the return link from the terminal,” as recited in claim 3. Office Action, page 8.

Applicants respectfully submit that Kim also does not teach or suggest this limitation. As discussed above, Kim describes a controller 330 that implements a rain attenuation compensation method. Kim states:

A controller [330] estimates (S401) the signal-to-noise (S/N) ratio of the present time point on the basis of received M-ary PSK modulation signal, predicts (S402) the signal-to-noise (S/N) ratio of the next time point on the basis of the estimated received signal-to-noise value at the past and present time points.

Kim, col. 5, lines 7-14 (emphasis added). Thus, Kim does not teach or suggest “identifying a change that has occurred in a signal-to-noise ratio,” as recited in claim 3. Instead, Kim teaches estimating the signal-to-noise ratio of the present time point, and then predicting the signal-to-noise ratio of the next time point based on past estimates. The Office Action appears to be asserting that the method in Kim involves comparing the estimated signal-to-noise ratio and the predicted signal-to-noise ratio, and that this comparison is “identifying a change ... in a signal-to-noise ratio” within the meaning of claim 3. Even if for the sake of argument it is assumed that these assertions are correct, Kim certainly does not teach or suggest “identifying a change that has occurred in a signal-to-noise ratio,” as recited in claim 3. Comparing a predicted signal-to-noise ratio and another signal-to-noise ratio cannot reasonably be construed as “identifying a change that has occurred.”

Because Kim does not teach or suggest “identifying a change that has occurred in a signal-to-noise ratio for the return link from the terminal,” it follows that Kim also does not teach or suggest “interpreting the change in the signal-to-noise ratio as indicating the change in the return link signal quality,” as recited in claim 3.

In view of the foregoing, and also in view of the arguments presented above in connection with claim 1 (from which claim 3 depends), Applicants respectfully submit that claim 3 is allowable. Accordingly, Applicants respectfully request that the rejection of claim 3 be withdrawn.

Claims 4-9 depend either directly or indirectly from claim 1, which was discussed above. Claims 22-25 depend either directly or indirectly from claim 21, which includes limitations similar to those in claim 1 that were discussed above. Claims 39-42 depend either directly or indirectly from claim 38, which includes limitations similar to those in claim 1 that were discussed above. Claims 50-54 depend either directly or indirectly from claim 49, which includes limitations similar to those in claim 1 that were discussed above. Accordingly, Applicants respectfully request that the rejection of claims 4-9, 22-25, 39-42, and 50-54 be withdrawn for at least the same reasons as those presented above in connection with claim 1.

III. Rejection of Claims 17 and 34 Under 35 U.S.C. § 103(a)

The Office Action rejected claims 17 and 34 under 35 U.S.C. § 103(a) as being unpatentable over Patterson in view of U.S. Patent No. 6,198,730 to Hogberg et al. (hereinafter, “Hogberg”). This rejection is respectfully traversed.

Claim 17 depends from claim 1, which was discussed above. Claim 34 depends from claim 21, which includes limitations similar to those in claim 1 that were discussed above. Accordingly, Applicants respectfully request that the rejection of claims 17 and 34 be withdrawn for at least the same reasons as those presented above in connection with claim 1.

IV. Rejection of Claims 15-16, 18-20, 32-33, 35-37, 45-47, and 57-59 Under 35 U.S.C. § 103(a)

The Office Action rejected claims 15-16, 18-20, 32-33, 35-37, 45-47, and 57-59 under 35 U.S.C. § 103(a) as being unpatentable over Patterson in view of U.S. Patent No. 6,781,978 to Xie et al. (hereinafter, "Xie"). This rejection is respectfully traversed.

Claims 15-16 and 18-20 depend either directly or indirectly from claim 1, which was discussed above. Claims 32-33 and 35-37 depend either directly or indirectly from claim 21, which includes limitations similar to those in claim 1 that were discussed above. Claims 45-47 depend from claim 38, which includes limitations similar to those in claim 1 that were discussed above. Claims 57-59 depend either directly or indirectly from claim 49, which includes limitations similar to those in claim 1 that were discussed above. Accordingly, Applicants respectfully request that the rejection of claims 15-16, 18-20, 32-33, 35-37, 45-47, and 57-59 be withdrawn for at least the same reasons as those presented above in connection with claim 1.

REQUEST FOR ALLOWANCE

In view of the foregoing, Applicants submit that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application are earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

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